EPI-LOG

Communicable Disease and Epidemiology News

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Reminder! Dangers of Eating Raw Shellfish

Last spring and summer, New York, Oregon, and Washington State experienced record-breaking outbreaks of *Vibrio parahaemolyticus* infection associated with consumption of raw shellfish from Washington and British Columbia. From May through July of 2006, 83 confirmed and 113 probable cases were reported. Clusters of illness were associated with restaurants, seafood markets, and recreational harvesting. King County clinicians played a critical role in controlling the outbreak by testing patients with GI illness, inquiring about raw oyster consumption, and reporting cases promptly to Public Health.

After the 2006 outbreak, state and local health officials as well as representatives from the shellfish industry convened to discuss lessons learned. A State Control Plan was developed for 2007, which builds upon the existing statewide system that routinely monitors commercial and recreational shellfish harvest sites for *V. parahaemolyticus.* The plan includes more stringent guidelines for temperature control of harvested shellfish.

V. parahaemolyticus lives worldwide in marine coastal environments. In warm weather, the bacteria multiply in the gut of filter-feeding mollusks including clams, mussels, and oysters (the most common food associated with infection in the United States). **The general rule to reduce the risk of *Vibrio* infection is to avoid eating raw shellfish in warm spring and summer months. *V. parahaemolyticus* can be killed by cooking shellfish to 145ºF.**

Vibriosis is the term used to describe illness caused by non-cholera-causing *Vibrio* species including *V. parahaemolyticus* and non-toxigenic *V. cholera*. Illness typically occurs 12-24 hours after exposure (range 4-30 hours) and lasts 1-7 days. Common symptoms include watery diarrhea, abdominal cramps, fever, nausea, vomiting, and headache. Up to 25 percent of cases may develop a dysentery-like syndrome with high fever, bloody or mucoid stools, and elevated WBC. Bacteremia is uncommon and occurs mainly in persons who are immune deficient. Cases are rarely fatal. **Persons with chronic liver disease, decreased gastric acidity, diabetes, peptic ulcer, or immunosuppression are especially susceptible to infection**. Antibiotic therapy is generally not indicated except in cases of severe or prolonged illness.

Consider *V. parahaemolyticus* in patients with a compatible clinical syndrome, and ask about recent travel and meals. Food history should include questions about eating raw or undercooked seafood, particularly shellfish, as well as the location and dates of meals. **For all patients with suspected vibriosis, obtain stool cultures to confirm the diagnosis, and specify on the order form that *V. parahaemolyticus* culture is being requested so that the lab can use the proper selective culture media for *Vibrio***.

Importance of Reporting: Prevent ongoing Consumption of Contaminated Shellfish

When confirmed or suspect cases of vibriosis are reported to Public Health, the cases are interviewed as soon as possible, and shellfish commercial identification tags are promptly retrieved from the restaurant or market to identify implicated shellfish and/or harvest sites. Affected growing areas may be closed by Washington State Department of Health until subsequent shellfish samples test negative for *Vibrio.*
Cases of confirmed *V. parahaemolyticus* should be reported to Public Health during regular work hours at 206-296-4774 or on our 24-hour automated disease report line at 206-296-4782.

Other Potential Seafood-Related Illnesses

Vibriosis is not the only illness associated with seafood consumption. “Red tides” occur as a result of a dramatic increase in toxin-producing algae that are then consumed by shellfish. Eating contaminated shellfish can result in paralytic, neurotoxic or other forms of shellfish poisoning, with symptoms ranging from nausea, vomiting, diarrhea and abdominal pain to tingling, burning, numbness, drowsiness, incoherent speech and respiratory paralysis.
Fish in the tuna family that have not been properly refrigerated may undergo bacterial spoilage, which can lead to scombroid or histamine poisoning upon consumption. This is often characterized by a tingling or burning sensation in the mouth, a rash on the upper body, hypotension, headaches, itchiness and gastrointestinal symptoms.

Seafood contaminated with the above marine toxins frequently looks, smells, and tastes normal. If you see a patient with suspicious symptoms who has recently consumed seafood, please notify Public Health immediately. Prompt notification of a suspect case of marine toxin poisoning is essential for the rapid identification of the source restaurant, oyster bed or fishing area.

Zebra of the month!— *An unusual case of otitis*

An adult male recently returned from vacationing in Hawaii complaining of a water-logged ear with watery discharge. Having swum and surfed in the Pacific Ocean, and knowing that he had a predisposition to ear infections, he promptly sought medical care and was diagnosed with a rare cause of otitis: *Vibrio alginolyticus*. *Vibrio* illness caused by recreational water exposures occurs in all regions of the United States, but most frequently occurs along the Gulf Coast. However, the majority of *V. alginolyticus* cases occur in the Pacific coast states, where the most common exposures occur through surfing and swimming. *V. alginolyticus* is one of 12 recognized marine *Vibrio* species that have been identified as being pathogenic for humans. It has been associated with wound infections, ear infections, and also with gastroenteritis and bacteraemia in immunocompromised patients after consumption of raw shellfish. Six cases of *V. alginolyticus* infection have been reported in King County over the past ten years, including five ear infections and one wound infection.

New Vaccine Protects Against Cervical Cancer, Genital Warts

In early June 2006, the FDA licensed the first vaccine to prevent cervical cancer and genital warts in females caused by vaccine-type genital human papillomavirus (HPV) infection. The quadrivalent vaccine, Gardasil®, protects against HPV types 6,11,16 and 18, which together are responsible for 70% of cervical cancers and 90% of genital warts.

Genital human papillomavirus is spread by skin to skin contact, and is the most common sexually transmitted infection (STI) in the United States, with 20 million persons currently infected and 6.2 million new cases each year. Of these, 74% of new cases occurred among those aged 15-24 years. Modeling estimates suggest that >80% of sexually active women will have acquired genital HPV by age 50 years[1], although not all of these infections are associated with cervical cancer.

Most HPV infections are asymptomatic and resolve without treatment, but persistent infection with oncogenic or high-risk strains can lead to cervical cancer. During 2007, an estimated 11,100 new cases will be diagnosed in the US, and approximately 3,700 women will die from cervical cancer[1]. An average of 57 King County women were diagnosed with cervical cancer annually between 1998 and 2002 and an average of 15 King County women died from cervical cancer annually between 1999 and 2003. Cervical cancer disproportionately affects women who: 1) are of lower socioeconomic status; 2) do not have regular access to health care, 3) are uninsured, and 4) are recent immigrants[2]. In King County, Asian and Pacific Islander women and women in poverty had higher death rates and lower PAP test rates.

In clinical trials involving 21,000 women, Gardasil was nearly 100% effective in preventing precancerous cervical, vaginal and vulvar lesions and genital warts caused by human papillomavirus types 6, 11, 16 and 18. Regular cervical cancer screening should continue because the vaccine will not protect against all types of HPV that cause cervical cancer, nor will it prevent other STI's.

HPV vaccine is recommended by the ACIP for *routine* use in females 11-12 years of age, although it can be given as early as nine years of age. Catch-up vaccination is recommended for females aged 13-26 years who have not yet been vaccinated. The vaccine should be administered before onset of sexual activity. However, females who are sexually active also may benefit. Females who have not been infected with any vaccine HPV type would receive the full benefit of vaccination. Females who already have been infected with one or more HPV type would still get protection from the vaccine types they have not acquired. The vaccine has not yet been licensed for males.

Gardasil is administered intramuscularly and can be given at the same time as other vaccines (both live and inactivated). It is contraindicated for those with an immediate hypersensitivity to yeast or any other vaccine component.

The three dose series is given as follows: **Dose 1:** Now **Dose 2**: 2 months after 1st dose. **Dose 3**: 6 months after 1st dose. Side effects include mild or moderate local reactions, such as pain and tenderness at the injection site.

Gardasil is available through the VFC program beginning in May, 2007.

Merck has included Gardasil among the vaccines available to income-eligible clients through its Patient Assistance Program. Patients 19 years of age and older who lack insurance coverage and meet specific income criteria are eligible to receive Gardasil at no cost from a licensed prescriber. The health care provider must work in a private practice or a clinic, that is not wholly owned and operated by the government. For more information, call 800-293-3881 Monday-Friday, or visit: http://www.merck.com/merckhelps/vaccines/home.html

Updated HPV materials for health care professionals are available online from the CDC at: www.cdc.gov/std/hpv/hpv-clinicians-brochure.htm.

[1] **http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5602a1.htm?s_cid=rr5602a1_e**

[2] **U.S Cancer Statistics Working Group. *United States Cancer Statistics: 1999-2002 Incidence and Mortality Web-based Report.* Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2005.**

Disease Reporting

AIDS/HIV	(206) 296-4645
STDs	(206) 731-3954
TB	(206) 731-4579
All Other Notifiable Communicable Diseases (24 hours a day)	(206) 296-4774
Automated reporting line for conditions not immediately notifiable	(206) 296-4782

Hotlines

Communicable Disease	(206) 296-4949
HIV/STD	(206) 205-STDS

Public Health-Seattle & King County Online Resources

Home Page: www.metrokc.gov/health/
The *EPI-LOG*: www.metrokc.gov/health/providers
Communicable Disease listserv (PHSKC INFO-X) at: mailman.u.washington.edu/mailman/listinfo/phskc-info-x
West Nile Virus Updates and Current Testing Guidelines: www.metrokc.gov/health/westnile/advisories.htm

Reported Cases of Selected Diseases, Seattle & King County 2007

	Cases Reported in April		Cases Reported Through April	
	2007	2006	2007	2006
Campylobacteriosis	13	16	65	68
Cryptosporidiosis	6	4	11	6
Chlamydial infections	441	374	1827	1768
Enterohemorrhagic *E. coli* (non-O157)	0	0	2	0
***E. coli* O157: H7**	1	1	6	4
Giardiasis	7	11	47	37
Gonorrhea	115	148	515	629
***Haemophilus influenzae* (cases <6 years of age)**	1	0	1	0
Hepatitis A	0	0	1	5
Hepatitis B (acute)	3	8	0	5
Hepatitis B (chronic)	70	276	90	281
Hepatitis C (acute)	0	3	0	3
Hepatitis C (chronic, confirmed/probable)	115	464	133	508
Hepatitis C (chronic, possible)	15	112	19	105
Herpes, genital (primary)	68	75	247	274
HIV and AIDS (including simultaneous diagnoses with AIDS)	35	29	124	100
Measles	0	0	0	0
Meningococcal Disease	1	1	2	4
Mumps	0	0	2	2
Pertussis	0	5	11	48
Rubella	0	0	0	0
Rubella, congenital	0	0	0	0
Salmonellosis	20	8	72	51
Shigellosis	10	7	23	11
Syphilis	26	23	51	81
Syphilis, congenital	0	0	0	0
Syphilis, late	8	17	23	26
Tuberculosis	9	11	47	29

The *EPI-LOG* is available in alternate formats upon request.